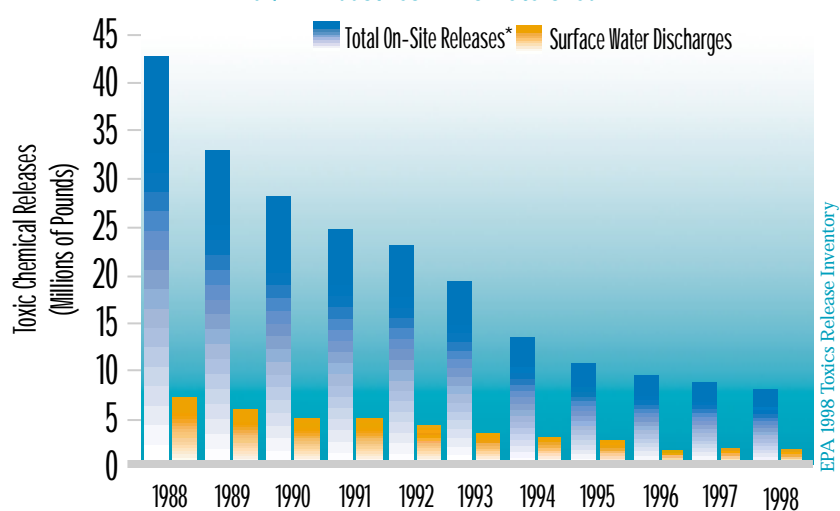


TRI Data

CT/NY Industries in LIS Watershed



* Total On-Site Releases include total air emissions, other on-site land releases, and surface water discharges.

Industrial Chemical Discharges

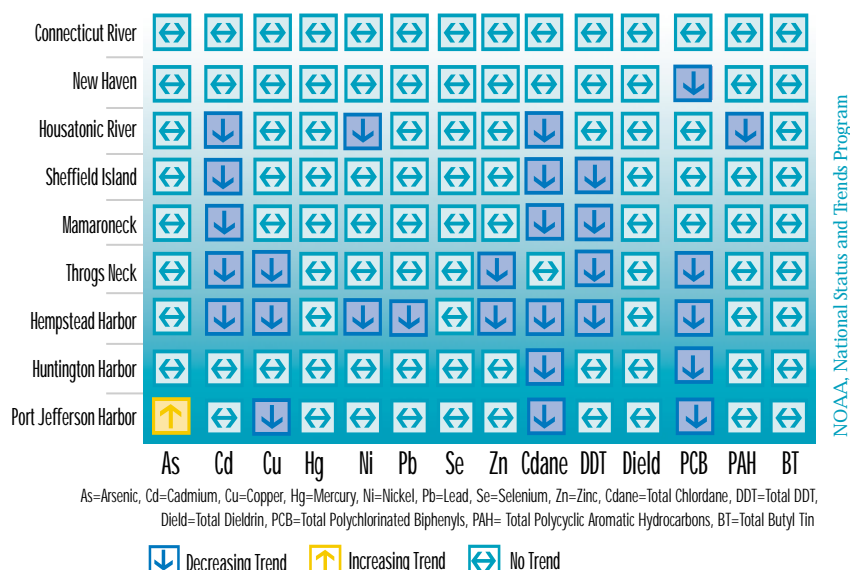
The Emergency Planning and Community Right to Know Act of 1986 requires facilities in the United States to report releases to the environment of more than 600 designated toxic chemicals. The U.S. Environmental Protection Agency (EPA) maintains the Toxics Release Inventory (TRI), a national database that identifies the chemicals manufactured and used at industrial facilities and the annual amounts of these chemicals released in waste. Seven new industrial sectors, in addition to the manufacturing industry, began reporting for the first time in 1998. The newly included sectors are electric utilities, coal mining, metal mining, chemical wholesalers, petroleum bulk plants and terminals, solvent recovery, and hazardous waste treatment, storage, and disposal. In addition, in 1999, EPA lowered the reporting thresholds for certain persistent toxic chemicals and certain other chemicals were added to the list of toxic chemicals. The major portion of the TRI consists of releases to air. Overall, toxic releases in the Sound's watershed have declined relative to the late 1980s. This is consistent with toxic releases throughout the country.

Contaminant Trends in Mussels

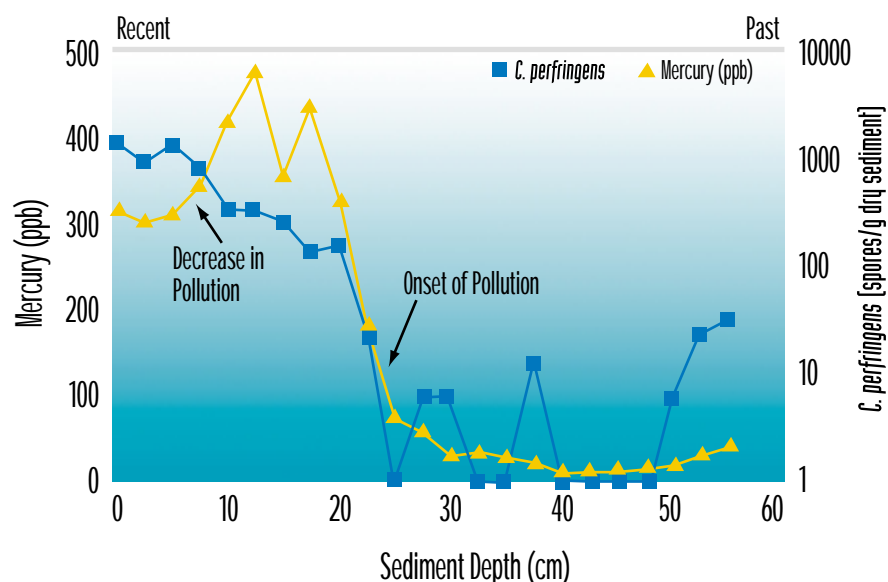
Since 1986, the National Status and Trends Mussel Watch Program has monitored chemical contaminants in bivalve mollusks. Concentrations of chemicals in mussels are related to the levels of chemicals in the water that they inhabit and in the food that they filter from the water. Decreased chemical concentrations in the water and in food sources will result in decreased concentrations in mussels.

On the whole, levels of metals (copper, nickel, lead, and zinc) and organic compounds in mussels have declined. Contamination is decreasing at many sites for chemicals whose use has been banned (chlordane, DDT, PCBs) or severely curtailed (cadmium). With the exception of arsenic in Port Jefferson Harbor, no chemical has increased in concentration in the monitored harbors in Long Island Sound.

Contaminant Trends in Mussels



Mercury Concentrations in Sediment



Varekamp, J.C., M.R. Buchholtz ten Brink, E.L. Mecray, and B. Kreulen, 2000, "Mercury in Long Island Sound Sediments", *Journal of Coastal Research*, v. 16, no. 3, p. 613-626.

Contaminants in Sediments

Human activities over the last 400 years have affected the water and sediment quality of Long Island Sound. Sediment cores provide a history of contaminant inputs resulting from changes in the watershed. Surface sediments reflect recent condition; deeper sediments reflect past conditions. Many contaminants increased in the sediment of the Sound with increasing population and industrialization of the watershed. More recently, however, pollution controls and changes in manufacturing trends have decreased the amount of contaminants discharged in Long Island Sound and have resulted in decreased concentrations of contaminants in the surface sediments.

Mercury concentrations in the upper 10-15 cm of sediment have decreased, reflecting reductions in mercury sources in recent decades. *C. perfringens*, an indicator of sewage-derived pollution, mirrors the continued increases in population around the Sound.